

SOLICITATION/CONTRACT/ORDER FOR COMMERCIAL ITEMS <i>OFFEROR TO COMPLETE BLOCKS 12, 17, 23, 24, AND 30</i>					1. REQUISITION NUMBER		PAGE 1 OF 31						
2. CONTRACT NO.		3. AWARD/EFFECTIVE DATE		4. ORDER NUMBER		5. SOLICITATION NUMBER N00174-03-R-0019		6. SOLICITATION ISSUE DATE 29-Apr-2003					
7. FOR SOLICITATION INFORMATION CALL		a. NAME LEVONSON M. WHITE				b. TELEPHONE NUMBER (No Collect Calls) 301/744-6687		8. OFFER DUE DATE/LOCAL TIME 28-May-2003 14:00					
9. ISSUED BY NAVSEA INDIAN HEAD 101 STRAUSS AVE. ATTN: LEVONSON (BUDDY) WHITE INDIAN HEAD MD 20640-5035 TEL: 301/744-6687 FAX:		CODE N00174		10. THIS ACQUISITION IS <input checked="" type="checkbox"/> UNRESTRICTED <input type="checkbox"/> SET ASIDE: %FOR <input type="checkbox"/> SMALL BUSINESS <input type="checkbox"/> SMALL DISADV. BUSINESS <input type="checkbox"/> 8(A) SIC: 2819 SIZE STANDARD: 1000		11. DELIVERY FOR FOB DESTINATION UNLESS BLOCK IS MARKED <input type="checkbox"/> SEE SCHEDULE <input type="checkbox"/> 13 a. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 700) 13 b. RATING 14. METHOD OF SOLICITATION <input type="checkbox"/> RFQ <input type="checkbox"/> IFB <input checked="" type="checkbox"/> RFP		12. DISCOUNT TERMS					
15. DELIVER TO SEE SCHEDULE		CODE		16. ADMINISTERED BY SEE ITEM 9									
17 a. CONTRACTOR/ OFFEROR TEL.		CODE		FACILITY CODE		18 a. PAYMENT WILL BE MADE BY CODE							
<input type="checkbox"/> 17 b. CHECK IF REMITTANCE IS DIFFERENT AND PUT SUCH ADDRESS IN OFFER		18 b. SUBMIT INVOICES TO ADDRESS SHOWN IN BLOCK 18 a. UNLESS BLOCK BELOW IS CHECKED <input type="checkbox"/> SEE ADDENDUM											
19. ITEM NO.		20. SCHEDULE OF SUPPLIES/ SERVICES				21 QUANTITY		22. UNIT		23. UNIT PRICE		24. AMOUNT	
		SEE SCHEDULE											
25. ACCOUNTING AND APPROPRIATION DATA										26. TOTAL AWARD AMOUNT			
<input type="checkbox"/> 27 a. SOLICITATION INCORPORATES BY REFERENCE FAR 52.212-1. 52.212-4. FAR 52.212-3 AND 52.212-5 ARE ATTACHED.										ADDENDA <input type="checkbox"/> ARE <input type="checkbox"/> ARE NOT ATTACHED			
<input type="checkbox"/> 27 b. CONTRACT/PURCHASE ORDER INCORPORATES BY REFERENCE FAR 52.212-4. FAR 52.212-5 IS ATTACHED.										ADDENDA <input type="checkbox"/> ARE <input type="checkbox"/> ARE NOT ATTACHED			
28. CONTRACTOR IS REQUIRED TO SIGN THIS DOCUMENT AND RETURN <u>2</u> COPIES <input checked="" type="checkbox"/> TO ISSUING OFFICE. CONTRACTOR AGREES TO FURNISH AND DELIVER ALL ITEMS SET FORTH OR OTHERWISE IDENTIFIED ABOVE AND ON ANY ADDITIONAL SHEETS SUBJECT TO THE TERMS AND CONDITIONS SPECIFIED HEREIN.					29. AWARD OF CONTRACT: REFERENCE <input type="checkbox"/> OFFER DATED . YOUR OFFER ON SOLICITATION (BLOCK 5), INCLUDING ANY ADDITIONS OR CHANGES WHICH ARE SET FORTH HEREIN, IS ACCEPTED AS TO ITEMS:								
30 a. SIGNATURE OF OFFEROR/CONTRACTOR					31 a. UNITED STATES OF AMERICA (SIGNATURE OF CONTRACTING OFFICER)								
30 b. NAME AND TITLE OF SIGNER (TYPE OR PRINT)			30 c. DATE SIGNED		31 b. NAME OF CONTRACTING OFFICER (TYPE OR PRINT)			31 c. DATE SIGNED					
32 a. QUANTITY IN COLUMN 21 HAS BEEN <input type="checkbox"/> RECEIVED <input type="checkbox"/> INSPECTED <input type="checkbox"/> ACCEPTED, AND CONFORMS TO THE CONTRACT, EXCEPT AS NOTED					33. SHIP NUMBER <input type="checkbox"/> PARTIAL <input type="checkbox"/> FINAL		34. VOUCHER NUMBER		35. AMOUNT VERIFIED CORRECT FOR				
32 b. SIGNATURE OF AUTHORIZED GOVT. REPRESENTATIVE			32 c. DATE		36. PAYMENT <input type="checkbox"/> COMPLETE <input type="checkbox"/> PARTIAL <input type="checkbox"/> FINAL			37. CHECK NUMBER					
41 a. I CERTIFY THIS ACCOUNT IS CORRECT AND PROPER FOR PAYMENT					38. S/R ACCOUNT NUMBER		39. S/R VOUCHER NUMBER		40. PAID BY				
41 b. SIGNATURE AND TITLE OF CERTIFYING OFFICER			41 c. DATE		42a. RECEIVED BY (Print)								
				42b. RECEIVED AT (Location)									
				42c. DATE REC'D (YY/MM/DD)		42d. TOTAL CONTAINERS							

AUTHORIZED FOR LOCAL REPRODUCTION

STANDARD FORM 1449 (10-95)
Prescribed by GSA
FAR (48 CFR) 53.212

SECTION SF 1449 CONTINUATION SHEET

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0001	SPHERICAL ALUMINUM POWDER FFP - Provide Spherical Aluminum Powder in accordance with WS19742, MIL-STD-129P and ASTM B329.	7,000.00	Pound		

 NET AMT

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0002	OPTION I - SPHERICAL ALUMINUM POWDER FFP - Provide Spherical Aluminum Powder in accordance with WS19742, MIL-STD-129P and ASTM B329.	7,000.00	Pound		

 NET AMT

STEPLADDER PRICING

STEPLADDER NAME	ITEM NO	FROM QUANTITY	TO QUANTITY	UNIT PRICE
CLIN 0002	0002	1.00	2,000.00	
		2,001.00	4,000.00	
		4,001.00	6,000.00	
		6,001.00	8,000.00	
		8,001.00	10,000.00	

Note: Should the Government choose to exercise the options, each option will be exercised for one quantity only. Once an option has been exercised, that option is no longer available.

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0003		7,000.00	Pound		
	OPTION II - SPHERICAL ALUMINUM POWDER				
	FFP - Provide Spherical Aluminum Powder in accordance with WS19742, MIL-STD-129P and ASTM B329.				

NET AMT

STEPLADDER PRICING

STEPLADDER NAME	ITEM NO	FROM QUANTITY	TO QUANTITY	UNIT PRICE
CLIN 0003	0003	1.00	2,000.00	
		2,001.00	4,000.00	
		4,001.00	6,000.00	
		6,001.00	8,000.00	
		8,001.00	10,000.00	

Note: Should the Government choose to exercise the options, each option will be exercised for one quantity only. Once an option has been exercised, that option is no longer available.

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0004		7,000.00	Pound		
	OPTION III - SPHERICAL ALUMINUM POWDER				
	FFP - Provide Spherical Aluminum Powder in accordance with WS19742, MIL-STD-129P and ASTM B329.				

NET AMT

STEPLADDER PRICING

STEPLADDER NAME	ITEM NO	FROM QUANTITY	TO QUANTITY	UNIT PRICE
CLIN 0004	0004	1.00	2,000.00	
		2,001.00	4,000.00	
		4,001.00	6,000.00	
		6,001.00	8,000.00	
		8,001.00	10,000.00	

Note: Should the Government choose to exercise the options, each option will be exercised for one quantity only. Once an option has been exercised, that option is no longer available.

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0005		7,000.00	Pound		
	OPTION IV - SPHERICAL ALUMINUM POWDER				
	FFP - Provide Spherical Aluminum Powder in accordance with WS19742, MIL-STD-129P and ASTM B329.				

NET AMT

STEPLADDER PRICING

STEPLADDER NAME	ITEM NO	FROM QUANTITY	TO QUANTITY	UNIT PRICE
CLIN 0005	0005	1.00	2,000.00	
		2,001.00	4,000.00	
		4,001.00	6,000.00	
		6,001.00	8,000.00	
		8,001.00	10,000.00	

Note: Should the Government choose to exercise the options, each option will be exercised for one quantity only. Once an option has been exercised, that option is no longer available.

CLAUSES INCORPORATED BY REFERENCE:

52.211-8	Time of Delivery	JUN 1997
52.217-5	Evaluation Of Options	JUL 1990

CLAUSES INCORPORATED BY FULL TEXT

MIL-STD-129P and ASTM are available at WWW.IHSERC.COM

STANDARD INSPECTION PROCEDURE FOR ALUMINUM POWDER (SPERICAL)

STEP REQUIREMENTS

1. Vendor must certify by analysis that the material meets the requirements below. Reference WS 19742 for test procedures.

	<u>Min</u>	<u>Max</u>
(a) Free Aluminum, %	98.0	---
(b) Volatile Matter %	---	0.10
(c) Iron, as Fe, %	---	0.40
(d) Average Particle Size		
X100 Microtrac (in SRA 150 module), u	7	12
(e) Apparent Density, g/cc	0.60	0.96
(f) Paste Viscosity, kp	---	5.5
(g) Particles shall be spherical versus ground		

2. Cast Plant acceptance by laboratory analysis for free Al in accordance with MIL-A-23950.
3. Lab shall also take pictures of Aluminum to show spherical particles and perform a Microtrac analysis to compare to previous lots.
4. Sampling
Each lot or shipment shall be sampled for testing. If the lot of shipment contains less than five containers, Sample all containers. If the lot or shipment contains more than five containers, sample 10%(not more than 10 of the containers). Composite all of the samples, mix well and make the required test.
5. Retest
Retest within 1 year for 1(b) and 1(d). Sample sizes shall be at least 20 grams.

ADDITIONAL REQUIREMENTS

1. Vendor must provide a Certificate of Analysis (COA), Certificate of Compliance (COA), and Material Safety Data Sheet (MSDS) for the product. Copies of the COA, the COC and the MSDS and all testing reports shall accompany the product with other shipping documents. In addition, a copy of all these document shall be faxed to NAVSEA IHDIV, NSWC, Attn: Code 2110WW at (301) 744-4352.
2. Material must be from one homogenous lot.
3. Material properties must correspond to and meet specification of Paragraph 1 of Standard Inspection Procedure for Aluminum Powder (Spherical).
4. A sample of the material, Material Safety Data Sheet (MSDS) and Certificate of Analysis (COA) shall accompany all proposals.

IHD 30 - HAZARDOUS MATERIALS (NAVSEA/IHD) FEB 2000

- (a) Packaging, Packing, Marking and Labeling Hazardous materials to be shipped by any mode or combination of transportation modes shall be prepared (properly classed, described, packaged, marked, labeled, transport vehicle placarded, etc.) for shipment in accordance with MIL and all applicable government and carrier regulations in effect at time of shipment.
- (b) In the event of a conflict between specific requirements in the contract or order and existing applicable regulations, the regulations take precedence. Under no circumstances shall the contractor knowingly use materials, markings or procedures which are not in accordance with laws and regulations applicable to the mode of transportation employed.

TYPE OF SHIPMENT REGULATIONS	APPLICABLE
1. Domestic	A
2. Domestic Air Commercial	A, B, C
3. Domestic Air Military	A, F
*4. Export Surface	A, E, G
*5. Export Air Commercial	A, D, G
*6. Export Air Military (MAC)	F, G

LIST OF REGULATIONS

- A. Code of Federal Regulations Title: 49 Transportation Parts 100
- B. Official Air Transport Restricted Articles Tariff No. 6C.A.B. 82
- C. Official Air Transport Restricted Articles Circular No. 6
- D. International Air Transport Association Restricted Articles Regulations
- E. International Maritime Dangerous Goods Code
- F. Air Force Joint Manual (AFJM) 24Preparation of Hazardous Materials for Military Air Shipment
- *G. Export shipments are also subject to the domestic regulations indicated to the port of embarkation.

52.212-1 INSTRUCTIONS TO OFFERORS--COMMERCIAL ITEMS (OCT 2000)

(a) North American Industry Classification System (NAICS) code and small business size standard. The NAICS code and small business size standard for this acquisition appear in Block 10 of the solicitation cover sheet (SF 1449). However, the small business size standard for a concern which submits an offer in its own name, but which proposes to furnish an item which it did not itself manufacture, is 500 employees.

(b) Submission of offers. Submit signed and dated offers to the office specified in this solicitation at or before the exact time specified in this solicitation. Offers may be submitted on the SF 1449, letterhead stationery, or as otherwise specified in the solicitation. As a minimum, offers must show--

- (1) The solicitation number;
- (2) The time specified in the solicitation for receipt of offers;
- (3) The name, address, and telephone number of the offeror;
- (4) A technical description of the items being offered in sufficient detail to evaluate compliance with the requirements in the solicitation. This may include product literature, or other documents, if necessary;
- (5) Terms of any express warranty;
- (6) Price and any discount terms;
- (7) "Remit to" address, if different than mailing address;
- (8) A completed copy of the representations and certifications at FAR 52.212-3;
- (9) Acknowledgment of Solicitation Amendments;
- (10) Past performance information, when included as an evaluation factor, to include recent and relevant contracts for the same or similar items and other references (including contract numbers, points of contact with telephone numbers and other relevant information); and

(11) If the offer is not submitted on the SF 1449, include a statement specifying the extent of agreement with all terms, conditions, and provisions included in the solicitation. Offers that fail to furnish required representations or information, or reject the terms and conditions of the solicitation may be excluded from consideration.

(c) Period for acceptance of offers. The offeror agrees to hold the prices in its offer firm for 30 calendar days from the date specified for receipt of offers, unless another time period is specified in an addendum to the solicitation.

(d) Product samples. When required by the solicitation, product samples shall be submitted at or prior to the time specified for receipt of offers. Unless otherwise specified in this solicitation, these samples shall be submitted at no expense to the Government, and returned at the sender's request and expense, unless they are destroyed during preaward testing.

(e) Multiple offers. Offerors are encouraged to submit multiple offers presenting alternative terms and conditions or commercial items for satisfying the requirements of this solicitation. Each offer submitted will be evaluated separately.

(f) Late submissions, modifications, revisions, and withdrawals of offers:

(1) Offerors are responsible for submitting offers, and any modifications, revisions, or withdrawals, so as to reach the Government office designated in the solicitation by the time specified in the solicitation. If no time is specified in the solicitation, the time for receipt is 4:30 p.m., local time, for the designated Government office on the date that offers or revisions are due.

(2)(i) Any offer, modification, revision, or withdrawal of an offer received at the Government office designated in the solicitation after the exact time specified for receipt of offers is "late" and will not be considered unless it is received before award is made, the Contracting Officer determines that accepting the late offer would not unduly delay the acquisition; and--

(A) If it was transmitted through an electronic commerce method authorized by the solicitation, it was received at the initial point of entry to the Government infrastructure not later than 5:00 p.m. one working day prior to the date specified for receipt of offers; or

(B) There is acceptable evidence to establish that it was received at the Government installation designated for receipt of offers and was under the Government's control prior to the time set for receipt of offers; or

(C) If this solicitation is a request for proposals, it was the only proposal received.

(ii) However, a late modification of an otherwise successful offer, that makes its terms more favorable to the Government, will be considered at any time it is received and may be accepted.

(3) Acceptable evidence to establish the time of receipt at the Government installation includes the time/date stamp of that installation on the offer wrapper, other documentary evidence of receipt maintained by the installation, or oral testimony or statements of Government personnel.

(4) If an emergency or unanticipated event interrupts normal Government processes so that offers cannot be received at the Government office designated for receipt of offers by the exact time specified in the solicitation, and urgent Government requirements preclude amendment of the solicitation or other notice of an extension of the closing date, the time specified for receipt of offers will be deemed to be extended to the same time of day specified in the solicitation on the first work day on which normal Government processes resume.

(5) Offers may be withdrawn by written notice received at any time before the exact time set for receipt of offers. Oral offers in response to oral solicitations may be withdrawn orally. If the solicitation authorizes facsimile offers, offers may be withdrawn via facsimile received at any time before the exact time set for receipt of offers, subject to the conditions specified in the solicitation concerning facsimile offers. An offer may be withdrawn in person by an

offeror or its authorized representative if, before the exact time set for receipt of offers, the identity of the person requesting withdrawal is established and the person signs a receipt for the offer.

(g) Contract award (not applicable to Invitation for Bids). The Government intends to evaluate offers and award a contract without discussions with offerors. Therefore, the offeror's initial offer should contain the offeror's best terms from a price and technical standpoint. However, the Government reserves the right to conduct discussions if later determined by the Contracting Officer to be necessary. The Government may reject any or all offers if such action is in the public interest; accept other than the lowest offer; and waive informalities and minor irregularities in offers received.

(h) Multiple awards. The Government may accept any item or group of items of an offer, unless the offeror qualifies the offer by specific limitations. Unless otherwise provided in the Schedule, offers may not be submitted for quantities less than those specified. The Government reserves the right to make an award on any item for a quantity less than the quantity offered, at the unit prices offered, unless the offeror specifies otherwise in the offer.

(i) Availability of requirements documents cited in the solicitation. (1) The Index of Federal Specifications, Standards and Commercial Item Descriptions and the documents listed in it may be obtained from the General Services Administration, Federal Supply Service Bureau, Specifications Section, Suite 8100, 470 L'Enfant Plaza, SW, Washington, DC 20407 ((202) 619-8925).

(2) The DOD Index of Specifications and Standards (DODISS) and documents listed in it may be obtained from the Standardization Documents Desk, Building 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094 (telephone (215) 697-2569).

(i) Availability of requirements documents cited in the solicitation. (1)(i) The GSA Index of Federal Specifications, Standards and Commercial Item Descriptions, FPMR Part 101-29, and copies of specifications, standards, and commercial item descriptions cited in this solicitation may be obtained for a fee by submitting a request to--GSA Federal Supply Service Specifications Section, Suite 8100, 470 East L'Enfant Plaza, SW, Washington, DC 20407, Telephone (202) 619-8925, Facsimile (202) 619-8978.

(ii) If the General Services Administration, Department of Agriculture, or Department of Veterans Affairs issued this solicitation, a single copy of specifications, standards, and commercial item descriptions cited in this solicitation may be obtained free of charge by submitting a request to the addressee in paragraph (i)(1)(i) of this provision. Additional copies will be issued for a fee.

(2) The DoD Index of Specifications and Standards (DoDISS) and documents listed in it may be obtained from the--Department of Defense Single Stock Point (DoDSSP), Building 4, Section D, 700 Robbins Avenue, Philadelphia, PA 19111-5094, Telephone (215) 697-2667/2179, Facsimile (215) 697-1462.

(i) Automatic distribution may be obtained on a subscription basis.

(ii) Order forms, pricing information, and customer support information may be obtained--

(A) By telephone at (215) 697-2667/2179; or

(B) Through the DoDSSP Internet site at <http://assist.daps.mil>.

(3) Nongovernment (voluntary) standards must be obtained from the organization responsible for their preparation, publication, or maintenance.

(j) Data Universal Numbering System (DUNS) Number. (Applies to offers exceeding \$25,000.) The offeror shall enter, in the block with its name and address on the cover page of its offer, the annotation "DUNS" followed by the DUNS number that identifies the offeror's name and address. If the offeror does not have a DUNS number, it should contact Dun and Bradstreet to obtain one at no charge. An offeror within the United States may call 1-800-333-0505. The offeror may obtain more information regarding the DUNS number, including locations of local Dun and

Bradstreet Information Services offices for offerors located outside the United States, from the Internet home page at <http://www.customerservice@dnb.com/>. If an offeror is unable to locate a local service center, it may send an e-mail to Dun and Bradstreet at globalinfo@mail.dnb.com.

(End of provision)

52.212-3 OFFEROR REPRESENTATIONS AND CERTIFICATIONS--COMMERCIAL ITEMS (JUL 2002)
ALTERNATE I (APR 2002)

(a) Definitions. As used in this provision:

"Emerging small business" means a small business concern whose size is no greater than 50 percent of the numerical size standard for the NAICS code designated.

"Forced or indentured child labor" means all work or service-

(1) Exacted from any person under the age of 18 under the menace of any penalty for its nonperformance and for which the worker does not offer himself voluntarily; or

(2) Performed by any person under the age of 18 pursuant to a contract the enforcement of which can be accomplished by process of penalties.

Service-disabled veteran-owned small business concern--

(1) Means a small business concern--

(i) Not less than 51 percent of which is owned by one or more service-disabled veterans or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more service-disabled veterans; and

(ii) The management and daily business operations of which are controlled by one or more service-disabled veterans or, in the case of a veteran with permanent and severe disability, the spouse or permanent caregiver of such veteran.

(2) Service-disabled veteran means a veteran, as defined in 38 U.S.C. 101(2), with a disability that is service-connected, as defined in 38 U.S.C. 101(16).

"Small business concern" means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the criteria in 13 CFR Part 121 and size standards in this solicitation.

Veteran-owned small business concern means a small business concern--

(1) Not less than 51 percent of which is owned by one or more veterans (as defined at 38 U.S.C. 101(2)) or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more veterans; and

(2) The management and daily business operations of which are controlled by one or more veterans.

"Women-owned small business concern" means a small business concern--

(1) That is at least 51 percent owned by one or more women or, in the case of any publicly owned business, at least 51 percent of its stock of which is owned by one or more women; and

(2) Whose management and daily business operations are controlled by one or more women.

"Women-owned business concern" means a concern which is at least 51 percent owned by one or more women; or in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more women; and whose management and daily business operations are controlled by one or more women.

(b) Taxpayer Identification Number (TIN) (26 U.S.C. 6109, 31 U.S.C. 7701). (Not applicable if the offeror is required to provide this information to a central contractor registration database to be eligible for award.)

(1) All offerors must submit the information required in paragraphs (b)(3) through (b)(5) of this provision to comply with debt collection requirements of 31 U.S.C. 7701(c) and 3325(d), reporting requirements of 26 U.S.C. 6041, 6041A, and 6050M, and implementing regulations issued by the Internal Revenue Service (IRS).

(2) The TIN may be used by the Government to collect and report on any delinquent amounts arising out of the offeror's relationship with the Government (31 U.S.C. 7701(c)(3)). If the resulting contract is subject to the payment reporting requirements described in FAR 4.904, the TIN provided hereunder may be matched with IRS records to verify the accuracy of the offeror's TIN.

(3) Taxpayer Identification Number (TIN).

___ TIN:-----

___ TIN has been applied for.

___ TIN is not required because:

___ Offeror is a nonresident alien, foreign corporation, or foreign partnership that does not have income effectively connected with the conduct of a trade or business in the United States and does not have an office or place of business or a fiscal paying agent in the United States;

Offeror is an agency or instrumentality of a foreign government;

___ Offeror is an agency or instrumentality of the Federal Government.

(4) Type of organization.

___ Sole proprietorship;

___ Partnership;

___ Corporate entity (not tax-exempt);

___ Corporate entity (tax-exempt);

___ Government entity (Federal, State, or local);

___ Foreign government;

___ International organization per 26 CFR 1.6049-4;

___ Other-----

(5) Common parent.

___ Offeror is not owned or controlled by a common parent;

____ Name and TIN of common parent:

Name-----

TIN-----

(c) Offerors must complete the following representations when the resulting contract is to be performed inside the United States, its territories or possessions, Puerto Rico, the Trust Territory of the Pacific Islands, or the District of Columbia. Check all that apply.

(1) Small business concern. The offeror represents as part of its offer that it () is, () is not a small business concern.

(2) Veteran-owned small business concern. (Complete only if the offeror represented itself as a small business concern in paragraph (c)(1) of this provision.) The offeror represents as part of its offer that it () is, () is not a veteran-owned small business concern.

(3) Service-disabled veteran-owned small business concern. (Complete only if the offeror represented itself as a veteran-owned small business concern in paragraph (c)(2) of this provision.) The offeror represents as part of its offer that it () is, () is not a service-disabled veteran-owned small business concern.

(4) Small disadvantaged business concern. (Complete only if the offeror represented itself as a small business concern in paragraph (c)(1) of this provision.) The offeror represents, for general statistical purposes, that it () is, () is not a small disadvantaged business concern as defined in 13 CFR 124.1002.

(5) Women-owned small business concern. (Complete only if the offeror represented itself as a small business concern in paragraph (c)(1) of this provision.) The offeror represents that it () is, () is not a women-owned small business concern.

Note: Complete paragraphs (c)(6) and (c)(7) only if this solicitation is expected to exceed the simplified acquisition threshold.

(6) Women-owned business concern (other than small business concern). (Complete only if the offeror is a women-owned business concern and did not represent itself as a small business concern in paragraph (c)(1) of this provision.) The offeror represents that it () is, a women-owned business concern.

(7) Tie bid priority for labor surplus area concerns. If this is an invitation for bid, small business offerors may identify the labor surplus areas in which costs to be incurred on account of manufacturing or production (by offeror or first-tier subcontractors) amount to more than 50 percent of the contract price:

(8) Small Business Size for the Small Business Competitiveness Demonstration Program and for the Targeted Industry Categories under the Small Business Competitiveness Demonstration Program. (Complete only if the offeror has represented itself to be a small business concern under the size standards for this solicitation.)

(i) (Complete only for solicitations indicated in an addendum as being set-aside for emerging small businesses in one of the four designated industry groups (DIGs).) The offeror represents as part of its offer that it () is, () is not an emerging small business.

(ii) (Complete only for solicitations indicated in an addendum as being for one of the targeted industry categories (TICs) or four designated industry groups (DIGs).) Offeror represents as follows:

(A) Offeror's number of employees for the past 12 months (check the Employees column if size standard stated in the solicitation is expressed in terms of number of employees); or

(B) Offeror's average annual gross revenue for the last 3 fiscal years (check the Average Annual Gross Number of Revenues column if size standard stated in the solicitation is expressed in terms of annual receipts).

(Check one of the following):

Average Annual

Number of Employees Gross Revenues

☐ 50 or fewer ☐ \$1 million or less

☐ 51 - 100 ☐ \$1,000,001 - \$2 million

☐ 101 - 250 ☐ \$2,000,001 - \$3.5 million

☐ 251 - 500 ☐ \$3,500,001 - \$5 million

☐ 501 - 750 ☐ \$5,000,001 - \$10 million

☐ 751 - 1,000 ☐ \$10,000,001 - \$17 million

☐ Over 1,000 ☐ Over \$17 million

(9) (Complete only if the solicitation contains the clause at FAR 52.219-23, Notice of Price Evaluation Adjustment for Small Disadvantaged Business Concerns or FAR 52.219-25, Small Disadvantaged Business Participation Program-Disadvantaged Status and Reporting, and the offeror desires a benefit based on its disadvantaged status.)

(i) General. The offeror represents that either--

(A) It (☐) is, (☐) is not certified by the Small Business Administration as a small disadvantaged business concern and identified, on the date of this representation, as a certified small disadvantaged business concern in the database maintained by the Small Business Administration (PRO-Net), and that no material change in disadvantaged ownership and control has occurred since its certification, and, where the concern is owned by one or more individuals claiming disadvantaged status, the net worth of each individual upon whom the certification is based does not exceed \$750,000 after taking into account the applicable exclusions set forth at 13 CFR 124.104(c)(2); or

(B) It (☐) has, (☐) has not submitted a completed application to the Small Business Administration or a Private Certifier to be certified as a small disadvantaged business concern in accordance with 13 CFR 124, Subpart B, and a decision on that application is pending, and that no material change in disadvantaged ownership and control has occurred since its application was submitted.

(ii) Joint Ventures under the Price Evaluation Adjustment for Small Disadvantaged Business Concerns. The offeror represents, as part of its offer, that it is a joint venture that complies with the requirements in 13 CFR 124.1002(f) and that the representation in paragraph (c)(9)(i) of this provision is accurate for the small disadvantaged business concern that is participating in the joint venture. (The offeror shall enter the name of the small disadvantaged business concern that is participating in the joint venture: _____.)

(10) (i) It (☐) is, (☐) is not a HUBZone small business concern listed, on the date of this representation, on the List of Qualified HUBZone Small Business Concerns maintained by the Small Business Administration, and no material change in ownership and control, principal office, or HUBZone employee percentage has occurred since it was certified by the Small Business Administration in accordance with 13 CFR part 126; and

(ii) It (☐) is, (☐) is not a joint venture that complies with the requirements of 13 CFR part 126, and the representation in paragraph (c)(10)(i) of this provision is accurate for the HUBZone small business concern or concerns that are

participating on the joint venture. (The offeror shall enter the name or names of the HUBZone small business concern or concerns that are participating in the joint venture: _____.) Each HUBZone small business concern participating in the joint venture shall submit a separate signed copy of the HUBZone representation.

(11) (Complete if the offeror has represented itself as disadvantaged in paragraph (c)(4) or (c)(9) of this provision.) (The offeror shall check the category in which its ownership falls):

____ Black American.

____ Hispanic American.

____ Native American (American Indians, Eskimos, Aleuts, or Native Hawaiians).

____ Asian-Pacific American (persons with origins from Burma, Thailand, Malaysia, Indonesia, Singapore, Brunei, Japan, China, Taiwan, Laos, Cambodia (Kampuchea), Vietnam, Korea, The Philippines, U.S. Trust Territory of the Pacific Islands (Republic of Palau), Republic of the Marshall Islands, Federated States of Micronesia, the Commonwealth of the Northern Mariana Islands, Guam, Samoa, Macao, Hong Kong, Fiji, Tonga, Kiribati, Tuvalu, or Nauru).

____ Subcontinent Asian (Asian-Indian) American (persons with origins from India, Pakistan, Bangladesh, Sri Lanka, Bhutan, the Maldives Islands, or Nepal).

____ Individual/concern, other than one of the preceding.

(d) Representations required to implement provisions of Executive Order 11246--

(1) Previous Contracts and Compliance. The offeror represents that--

(i) It () has, () has not, participated in a previous contract or subcontract subject either to the Equal Opportunity clause of this solicitation; and

(ii) It () has, () has not, filed all required compliance reports.

(2) Affirmative Action Compliance. The offeror represents that--

(i) It () has developed and has on file, () has not developed and does not have on file, at each establishment, affirmative action programs required by rules and regulations of the Secretary of Labor (41 CFR Subparts 60-1 and 60-2), or

(ii) It () has not previously had contracts subject to the written affirmative action programs requirement of the rules and regulations of the Secretary of Labor.

(e) Certification Regarding Payments to Influence Federal Transactions (31 U.S.C. 1352). (Applies only if the contract is expected to exceed \$100,000.) By submission of its offer, the offeror certifies to the best of its knowledge and belief that no Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress or an employee of a Member of Congress on his or her behalf in connection with the award of any resultant contract.

(f) Buy American Act Certificate. (Applies only if the clause at Federal Acquisition Regulation (FAR) 52.225-1, Buy American Act--Supplies, is included in this solicitation.)

(1) The offeror certifies that each end product, except those listed in paragraph (f)(2) of this provision, is a domestic end product as defined in the clause of this solicitation entitled "Buy American Act--Balance of Payments Program--Supplies" and that the offeror has considered components of unknown origin to have been mined, produced, or

manufactured outside the United States. The offeror shall list as foreign end products those end products manufactured in the United States that do not qualify as domestic end products.

(2) Foreign End Products:

Line Item No.:-----

Country of Origin:-----

(List as necessary)

(3) The Government will evaluate offers in accordance with the policies and procedures of FAR Part 25.

(g)(1) Buy American Act--North American Free Trade Agreement--Israeli Trade Act Certificate. (Applies only if the clause at FAR 52.225-3, Buy American Act--North American Free Trade Agreement--Israeli Trade Act, is included in this solicitation.)

(i) The offeror certifies that each end product, except those listed in paragraph (g)(1)(ii) or (g)(1)(iii) of this provision, is a domestic end product as defined in the clause of this solicitation entitled "Buy American Act--North American Free Trade Agreement--Israeli Trade Act" and that the offeror has considered components of unknown origin to have been mined, produced, or manufactured outside the United States.

(ii) The offeror certifies that the following supplies are NAFTA country end products or Israeli end products as defined in the clause of this solicitation entitled "Buy American Act--North American Free Trade Agreement--Israeli Trade Act":

NAFTA Country or Israeli End Products

Line Item No.:-----

Country of Origin:-----

(List as necessary)

(iii) The offeror shall list those supplies that are foreign end products (other than those listed in paragraph (g)(1)(ii) of this provision) as defined in the clause of this solicitation entitled "Buy American Act--North American Free Trade Agreement--Israeli Trade Act--Balance of Payments Program." The offeror shall list as other foreign end products those end products manufactured in the United States that do not qualify as domestic end products.

Other Foreign End Products

Line Item No.:-----

Country of Origin:-----

(List as necessary)

(iv) The Government will evaluate offers in accordance with the policies and procedures of FAR Part 25.

(2) (2) Buy American Act--North American Free Trade Agreements--Israeli Trade Act Certificate, Alternate I (May 2002). If Alternate I to the clause at FAR 52.225-3 is included in this solicitation, substitute the following paragraph (g)(1)(ii) for paragraph (g)(1)(ii) of the basic provision:

(g)(1)(ii) The offeror certifies that the following supplies are Canadian end products as defined in the clause of this solicitation entitled "Buy American Act--North American Free Trade Agreement--Israeli Trade Act":

Canadian End Products:

Line Item No.

(List as necessary)

(3) Buy American Act--North American Free Trade Agreements--Israeli Trade Act Certificate, Alternate II (May 2002). If Alternate II to the clause at FAR 52.225-3 is included in this solicitation, substitute the following paragraph (g)(1)(ii) for paragraph (g)(1)(ii) of the basic provision:

(g)(1)(ii) The offeror certifies that the following supplies are Canadian end products or Israeli end products as defined in the clause of this solicitation entitled "Buy American Act--North American Free Trade Agreement--Israeli Trade Act":

Canadian or Israeli End Products:

Line Item No.

Country of Origin

(List as necessary)

(4) Trade Agreements Certificate. (Applies only if the clause at FAR 52.225-5, Trade Agreements, is included in this solicitation.)

(i) The offeror certifies that each end product, except those listed in paragraph (g)(4)(ii) of this provision, is a U.S.-made, designated country, Caribbean Basin country, or NAFTA country end product, as defined in the clause of this solicitation entitled "Trade Agreements."

(ii) The offeror shall list as other end products those end products that are not U.S.-made, designated country, Caribbean Basin country, or NAFTA country end products.

Other End Products

Line Item No.:-----

Country of Origin:-----

(List as necessary)

(iii) The Government will evaluate offers in accordance with the policies and procedures of FAR Part 25. For line items subject to the Trade Agreements Act, the Government will evaluate offers of U.S.-made, designated country, Caribbean Basin country, or NAFTA country end products without regard to the restrictions of the Buy American Act. The Government will consider for award only offers of U.S.-made, designated country, Caribbean Basin country, or NAFTA country end products unless the Contracting Officer determines that there are no offers for such products or that the offers for such products are insufficient to fulfill the requirements of the solicitation.

(h) Certification Regarding Debarment, Suspension or Ineligibility for Award (Executive Order 12549). (Applies only if the contract value is expected to exceed the simplified acquisition threshold.) The offeror certifies, to the best of its knowledge and belief, that the offeror and/or any of its principals--

(1) () Are, () are not presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any Federal agency; and

(2) () Have, () have not, within a three-year period preceding this offer, been convicted of or had a civil judgment rendered against them for: Commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a Federal, state or local government contract or subcontract; violation of Federal or state antitrust statutes relating to the submission of offers; or Commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, or receiving stolen property; and

(3) () Are, () are not presently indicted for, or otherwise criminally or civilly charged by a Government entity with, commission of any of these offenses.

(i) Certification Regarding Knowledge of Child Labor for Listed End Products (Executive Order 13126). [The Contracting Officer must list in paragraph (i)(1) any end products being acquired under this solicitation that are included in the List of Products Requiring Contractor Certification as to Forced or Indentured Child Labor, unless excluded at 22.1503(b).]

(1) Listed end products.

Listed End Product

Listed Countries of Origin

(2) Certification. (If the Contracting Officer has identified end products and countries of origin in paragraph (i)(1) of this provision, then the offeror must certify to either (i)(2)(i) or (i)(2)(ii) by checking the appropriate block.)

() (i) The offeror will not supply any end product listed in paragraph (i)(1) of this provision that was mined, produced, or manufactured in the corresponding country as listed for that product.

() (ii) The offeror may supply an end product listed in paragraph (i)(1) of this provision that was mined, produced, or manufactured in the corresponding country as listed for that product. The offeror certifies that it has made a good faith effort to determine whether forced or indentured child labor was used to mine, produce, or manufacture any such end product furnished under this contract. On the basis of those efforts, the offeror certifies that it is not aware of any such use of child labor.

(End of provision)

52.212-4 CONTRACT TERMS AND CONDITIONS-- COMMERCIAL ITEMS (FEB 2002)

(a) Inspection/Acceptance. The Contractor shall only tender for acceptance those items that conform to the requirements of this contract. The Government reserves the right to inspect or test any supplies or services that have been tendered for acceptance. The Government may require repair or replacement of nonconforming supplies or reperformance of nonconforming services at no increase in contract price. The Government must exercise its post-acceptance rights (1) within a reasonable time after the defect was discovered or should have been discovered; and

(2) before any substantial change occurs in the condition of the item, unless the change is due to the defect in the item.

(b) Assignment. The Contractor or its assignee may assign its rights to receive payment due as a result of performance of this contract to a bank, trust company, or other financing institution, including any Federal lending agency in accordance with the Assignment of Claims Act (31 U.S.C. 3727). However, when a third party makes payment (e.g., use of the Governmentwide commercial purchase card), the Contractor may not assign its rights to receive payment under this contract.

(c) Changes. Changes in the terms and conditions of this contract may be made only by written agreement of the parties.

(d) Disputes. This contract is subject to the Contract Disputes Act of 1978, as amended (41 U.S.C. 601-613). Failure of the parties to this contract to reach agreement on any request for equitable adjustment, claim, appeal or action arising under or relating to this contract shall be a dispute to be resolved in accordance with the clause at FAR 52.233-1, Disputes, which is incorporated herein by reference. The Contractor shall proceed diligently with performance of this contract, pending final resolution of any dispute arising under the contract.

(e) Definitions. The clause at FAR 52.202-1, Definitions, is incorporated herein by reference.

(f) Excusable delays. The Contractor shall be liable for default unless nonperformance is caused by an occurrence beyond the reasonable control of the Contractor and without its fault or negligence such as, acts of God or the public enemy, acts of the Government in either its sovereign or contractual capacity, fires, floods, epidemics, quarantine restrictions, strikes, unusually severe weather, and delays of common carriers. The Contractor shall notify the Contracting Officer in writing as soon as it is reasonably possible after the commencement or any excusable delay, setting forth the full particulars in connection therewith, shall remedy such occurrence with all reasonable dispatch and shall promptly give written notice to the Contracting Officer of the cessation of such occurrence.

(g) Invoice. (1) The Contractor shall submit an original invoice and three copies (or electronic invoice, if authorized) to the address designated in the contract to receive invoices. An invoice must include--

(i) Name and address of the Contractor;

(ii) Invoice date and number;

(iii) Contract number, contract line item number and, if applicable, the order number;

(iv) Description, quantity, unit of measure, unit price and extended price of the items delivered;

(v) Shipping number and date of shipment, including the bill of lading number and weight of shipment if shipped on Government bill of lading;

(vi) Terms of any discount for prompt payment offered;

(vii) Name and address of official to whom payment is to be sent;

(viii) Name, title, and phone number of person to notify in event of defective invoice; and

(ix) Taxpayer Identification Number (TIN). The Contractor shall include its TIN on the invoice only if required elsewhere in this contract.

(x) Electronic funds transfer (EFT) banking information.

(A) The Contractor shall include EFT banking information on the invoice only if required elsewhere in this contract.

(B) If EFT banking information is not required to be on the invoice, in order for the invoice to be a proper invoice, the Contractor shall have submitted correct EFT banking information in accordance with the applicable solicitation provision, contract clause (e.g., 52.232-33, Payment by Electronic Funds Transfer--Central Contractor Registration, or 52.232-34, Payment by Electronic Funds Transfer--Other Than Central Contractor Registration), or applicable agency procedures.

(C) EFT banking information is not required if the Government waived the requirement to pay by EFT.

(2) Invoices will be handled in accordance with the Prompt Payment Act (31 U.S.C. 3903) and Office of Management and Budget (OMB) prompt payment regulations at 5 CFR part 1315.

(h) Patent indemnity. The Contractor shall indemnify the Government and its officers, employees and agents against liability, including costs, for actual or alleged direct or contributory infringement of, or inducement to infringe, any United States or foreign patent, trademark or copyright, arising out of the performance of this contract, provided the Contractor is reasonably notified of such claims and proceedings.

(i) Payment. Payment shall be made for items accepted by the Government that have been delivered to the delivery destinations set forth in this contract. The Government will make payment in accordance with the Prompt Payment Act (31 U.S.C. 3903) and OMB prompt payment regulations at 5 CFR part 1315. If the Government makes payment by Electronic Funds Transfer (EFT), see 52.212-5(b) for the appropriate EFT clause. In connection with any discount offered for early payment, time shall be computed from the date of the invoice. For the purpose of computing the discount earned, payment shall be considered to have been made on the date which appears on the payment check or the specified payment date if an electronic funds transfer payment is made.

(j) Risk of loss. Unless the contract specifically provides otherwise, risk of loss or damage to the supplies provided under this contract shall remain with the Contractor until, and shall pass to the Government upon:

(1) Delivery of the supplies to a carrier, if transportation is f.o.b. origin; or

(2) Delivery of the supplies to the Government at the destination specified in the contract, if transportation is f.o.b. destination.

(k) Taxes. The contract price includes all applicable Federal, State, and local taxes and duties.

(l) Termination for the Government's convenience. The Government reserves the right to terminate this contract, or any part hereof, for its sole convenience. In the event of such termination, the Contractor shall immediately stop all work hereunder and shall immediately cause any and all of its suppliers and subcontractors to cease work. Subject to the terms of this contract, the Contractor shall be paid a percentage of the contract price reflecting the percentage of the work performed prior to the notice of termination, plus reasonable charges the Contractor can demonstrate to the satisfaction of the Government using its standard record keeping system, have resulted from the termination. The Contractor shall not be required to comply with the cost accounting standards or contract cost principles for this purpose. This paragraph does not give the Government any right to audit the Contractor's records. The Contractor shall not be paid for any work performed or costs incurred which reasonably could have been avoided.

(m) Termination for cause. The Government may terminate this contract, or any part hereof, for cause in the event of any default by the Contractor, or if the Contractor fails to comply with any contract terms and conditions, or fails to provide the Government, upon request, with adequate assurances of future performance. In the event of termination for cause, the Government shall not be liable to the Contractor for any amount for supplies or services not accepted, and the Contractor shall be liable to the Government for any and all rights and remedies provided by law. If it is determined that the Government improperly terminated this contract for default, such termination shall be deemed a termination for convenience.

(n) Title. Unless specified elsewhere in this contract, title to items furnished under this contract shall pass to the Government upon acceptance, regardless of when or where the Government takes physical possession.

(o) Warranty. The Contractor warrants and implies that the items delivered hereunder are merchantable and fit for use for the particular purpose described in this contract.

(p) Limitation of liability. Except as otherwise provided by an express or implied warranty, the Contractor will not be liable to the Government for consequential damages resulting from any defect or deficiencies in accepted items.

(q) Other compliances. The Contractor shall comply with all applicable Federal, State and local laws, executive orders, rules and regulations applicable to its performance under this contract.

(r) Compliance with laws unique to Government contracts. The Contractor agrees to comply with 31 U.S.C. 1352 relating to limitations on the use of appropriated funds to influence certain Federal contracts; 18 U.S.C. 431 relating to officials not to benefit; 40 U.S.C. 327, et seq., Contract Work Hours and Safety Standards Act; 41 U.S.C. 51-58, Anti-Kickback Act of 1986; 41 U.S.C. 265 and 10 U.S.C. 2409 relating to whistleblower protections; 49 U.S.C. 40118, Fly American; and 41 U.S.C. 423 relating to procurement integrity.

(s) Order of precedence. Any inconsistencies in this solicitation or contract shall be resolved by giving precedence in the following order: (1) the schedule of supplies/services; (2) the Assignments, Disputes, Payments, Invoice, Other Compliances, and Compliance with Laws Unique to Government Contracts paragraphs of this clause; (3) the clause at 52.212-5; (4) addenda to this solicitation or contract, including any license agreements for computer software; (5) solicitation provisions if this is a solicitation; (6) other paragraphs of this clause; (7) the Standard Form 1449; (8) other documents, exhibits, and attachments; and (9) the specification.

(End of clause)

52.212-5 CONTRACT TERMS AND CONDITIONS REQUIRED TO IMPLEMENT STATUTES OR EXECUTIVE ORDERS--COMMERCIAL ITEMS (MAY 2002)

(a) The Contractor shall comply with the following FAR clauses, which are incorporated in this contract by reference, to implement provisions of law or executive orders applicable to acquisitions of commercial items:

(1) 52.222-3, Convict Labor (E.O. 11755).

(2) 52.233-3, Protest after Award (31 U.S.C. 3553).

(b) The Contractor shall comply with the FAR clauses in this paragraph (b) that the Contracting Officer has indicated as being incorporated in this contract by reference to implement provisions of law or Executive orders applicable to acquisitions of commercial items or components:

(Contracting Officer shall check as appropriate.)

☒ (1) 52.203-6, Restrictions on Subcontractor Sales to the Government, with Alternate I (41 U.S.C. 253g and 10 U.S.C. 2402).

☐ (2) 52.219-3, Notice of HUBZone Small Business Set-Aside (Jan 1999).

☒ (3) 52.219-4, Notice of Price Evaluation Preference for HUBZone Small Business Concerns (Jan 1999) (if the offeror elects to waive the preference, it shall so indicate in its offer).

☐ (4) (i) 52.219-5, Very Small Business Set-Aside (Pub. L. 103-403, section 304, Small Business Reauthorization and Amendments Act of 1994).

☐ (ii) Alternate I to 52.219-5.

☐ (iii) Alternate II to 52.219-5.

- ☒ (5) 52.219-8, Utilization of Small Business Concerns (15 U.S.C. 637 (d)(2) and (3)).
- ☐ (6) 52.219-9, Small Business Subcontracting Plan (15 U.S.C. 637 (d)(4)).
- ☒ (7) 52.219-14, Limitations on Subcontracting (15 U.S.C. 637(a)(14)).
- ☐ (8)(i) 52.219-23, Notice of Price Evaluation Adjustment for Small Disadvantaged Concerns (Pub. L. 103-355, section 7102, and 10 U.S.C. 2323) (if the offeror elects to waive the adjustment, it shall so indicate in its offer).
- ☐ (ii) Alternate I of 52.219-23.
- ☐ (9) 52.219-25, Small Disadvantaged Business Participation Program--Disadvantaged Status and Reporting (Pub. L. 103-355, section 7102, and 10 U.S.C. 2323).
- ☐ (10) 52.219-26, Small Disadvantaged Business Participation Program--Incentive Subcontracting (Pub. L. 103-355, section 7102, and 10 U.S.C. 2323).
- ☒ (11) 52.222-21, Prohibition of Segregated Facilities (Feb 1999).
- ☒ (12) 52.222-26, Equal Opportunity (E.O. 11246).
- ☒ (13) 52.222-35, Equal Opportunity for Special Disabled Veterans, Veterans of the Vietnam Era and Other Eligible Veterans (38 U.S.C. 4212).
- ☒ (14) 52.222-36, Affirmative Action for Workers with Disabilities (29 U.S.C. 793).
- ☒ (15) 52.222-37, Employment Reports on Special Disabled Veterans, Veterans of the Vietnam Era and Other Eligible Veterans (38 U.S.C. 4212).
- ☒ (16) 52.222-19, Child Labor--Cooperation with Authorities and Remedies (E.O. 13126).
- ☐ (17)(i) 52.223-9, Estimate of Percentage of Recovered Material Content for EPA-Designated Products (42 U.S.C. 6962(c)(3)(A)(ii)).
- ☐ (ii) Alternate I of 52.223-9 (42 U.S.C. 6962(i)(2)(C)).
- ☒ (18) 52.225-1, Buy American Act--Supplies (41 U.S.C. 10a-10d).
- ☐ (19)(i) 52.225-3, Buy American Act--North American Free Trade Agreement--Israeli Trade Act (41 U.S.C. 10a-10d, 19 U.S.C. 3301 note, 19 U.S.C. 2112 note).
- ☐ (ii) Alternate I of 52.225-3.
- ☐ (iii) Alternate II of 52.225-3.
- ☒ (20) 52.225-5, Trade Agreements (19 U.S.C. 2501, et seq., 19 U.S.C. 3301 note).
- ☒ (21) 52.225-13, Restriction on Certain Foreign Purchases (E.O. 12722, 12724, 13059, 13067, 13121, and 13129).
- ☐ (22) 52.225-15, Sanctioned European Union Country End Products (E.O. 12849).
- ☐ (23) 52.225-16, Sanctioned European Union Country Services (E.O. 12849).

☒ (24) 52.232-33, Payment by Electronic Funds Transfer--Central Contractor Registration (31 U.S.C. 3332).

☐ (25) 52.232-34, Payment by Electronic Funds Transfer--Other than Central Contractor Registration (31 U.S.C. 3332).

☐ (26) 52.232-36, Payment by Third Party (31 U.S.C. 3332).

☐ (27) 52.239-1, Privacy or Security Safeguards (5 U.S.C. 552a).

☐ (28) 52.247-64, Preference for Privately Owned U.S.-Flag Commercial Vessels (46 U.S.C. 1241).

(c) The Contractor shall comply with the FAR clauses in this paragraph (c), applicable to commercial services, which the Contracting Officer has indicated as being incorporated in this contract by reference to implement provisions of law or executive orders applicable to acquisitions of commercial items or components:

(Contracting Officer check as appropriate.)

☐ (1) 52.222-41, Service Contract Act of 1965, As amended (41 U.S.C. 351, et. seq.).

☐ (2) 52.222-42, Statement of Equivalent Rates for Federal Hires (29 U.S.C. 206 and 41 U.S.C. 351, et. seq.).

☐ (3) 52.222-43, Fair Labor Standards Act and Service Contract Act -- Price Adjustment (Multiple Year and Option Contracts) (29 U.S.C.206 and 41 U.S.C. 351, et seq.).

☐ (4) 52.222-44, Fair Labor Standards Act and Service Contract Act - Price Adjustment (29 U.S.C. 206 and 41 U.S.C. 351, et seq.).

☐ (5) 52.222-47, SCA Minimum Wages and Fringe Benefits Applicable to Successor Contract Pursuant to Predecessor Contractor Collective Bargaining Agreement (CBA) (41 U.S.C. 351, et seq.).

(d) Comptroller General Examination of Record. The Contractor shall comply with the provisions of this paragraph (d) if this contract was awarded using other than sealed bid, is in excess of the simplified acquisition threshold, and does not contain the clause at 52.215-2, Audit and Records--Negotiation.

(1) The Comptroller General of the United States, or an authorized representative of the Comptroller General, shall have access to and right to examine any of the Contractor's directly pertinent records involving transactions related to this contract.

(2) The Contractor shall make available at its offices at all reasonable times the records, materials, and other evidence for examination, audit, or reproduction, until 3 years after final payment under this contract or for any shorter period specified in FAR Subpart 4.7, Contractor Records Retention, of the other clauses of this contract. If this contract is completely or partially terminated, the records relating to the work terminated shall be made available for 3 years after any resulting final termination settlement. Records relating to appeals under the disputes clause or to litigation or the settlement of claims arising under or relating to this contract shall be made available until such appeals, litigation, or claims are finally resolved.

(3) As used in this clause, records include books, documents, accounting procedures and practices, and other data, regardless of type and regardless of form. This does not require the Contractor to create or maintain any record that the Contractor does not maintain in the ordinary course of business or pursuant to a provision of law.

(e) Notwithstanding the requirements of the clauses in paragraphs (a), (b), (c) or (d) of this clause, the Contractor is not required to include any FAR clause, other than those listed below (and as may be required by an addenda to this paragraph to establish the reasonableness of prices under Part 15), in a subcontract for commercial items or commercial components--

(1) 52.222-26, Equal Opportunity (E.O. 11246);

(2) 52.222-35, Equal Opportunity for Special Disabled Veterans, Veterans of the Vietnam Era and Other Eligible Veterans (38 U.S.C. 4212);

(3) 52.222-36, Affirmative Action for Workers with Disabilities (29 U.S.C. 793);

(4) 52.247-64, Preference for Privately-Owned U.S.- Flag Commercial Vessels (46 U.S.C. 1241)(flow down not required for subcontracts awarded beginning May 1, 1996)., and

(5) 52.222-41, Service Contract Act of 1965, As Amended (41 U.S.C. 351, et seq.).

(End of clause)

52.216-1 TYPE OF CONTRACT (APR 1984)

The Government contemplates award of a FFP contract resulting from this solicitation.

(End of clause)

52.217-6 OPTION FOR INCREASED QUANTITY (MAR 1989)

The Government may increase the quantity of supplies called for in the Schedule at the unit price specified. The Contracting Officer may exercise the option by written notice to the Contractor within 60 days. Delivery of the added items shall continue at the same rate as the like items called for under the contract, unless the parties otherwise agree.

(End of clause)

52.219-4 NOTICE OF PRICE EVALUATION PREFERENCE FOR HUBZONE SMALL BUSINESS CONCERNS (JAN 1999)

(a) Definition. HUBZone small business concern, as used in this clause, means a small business concern that appears on the List of Qualified HUBZone Small Business Concerns maintained by the Small Business Administration.

(b) Evaluation preference. (1) Offers will be evaluated by adding a factor of 10 percent to the price of all offers, except--

(i) Offers from HUBZone small business concerns that have not waived the evaluation preference;

(ii) Otherwise successful offers from small business concerns;

(iii) Otherwise successful offers of eligible products under the Trade Agreements Act when the dollar threshold for application of the Act is exceeded (see 25.402 of the Federal Acquisition Regulation (FAR)); and

(iv) Otherwise successful offers where application of the factor would be inconsistent with a Memorandum of Understanding or other international agreement with a foreign government.

(2) The factor of 10 percent shall be applied on a line item basis or to any group of items on which award may be made. Other evaluation factors described in the solicitation shall be applied before application of the factor.

(3) A concern that is both a HUBZone small business concern and a small disadvantaged business concern will receive the benefit of both the HUBZone small business price evaluation preference and the small disadvantaged business price evaluation adjustment (see FAR clause 52.219-23). Each applicable price evaluation preference or adjustment shall be calculated independently against an offeror's base offer.

These individual preference amounts shall be added together to arrive at the total evaluated price for that offer.

(c) Waiver of evaluation preference. A HUBZone small business concern may elect to waive the evaluation preference, in which case the factor will be added to its offer for evaluation purposes. The agreements in paragraph (d) of this clause do not apply if the offeror has waived the evaluation preference.

___ Offeror elects to waive the evaluation preference.

(d) Agreement. A HUBZone small business concern agrees that in the performance of the contract, in the case of a contract for

(1) Services (except construction), at least 50 percent of the cost of personnel for contract performance will be spent for employees of the concern or employees of other HUBZone small business concerns;

(2) Supplies (other than procurement from a nonmanufacturer of such supplies), at least 50 percent of the cost of manufacturing, excluding the cost of materials, will be performed by the concern or other HUBZone small business concerns;

(3) General construction, at least 15 percent of the cost of the contract performance incurred for personnel will be spent on the concern's employees or the employees of other HUBZone small business concerns; or

(4) Construction by special trade contractors, at least 25 percent of the cost of the contract performance incurred for personnel will be spent on the concern's employees or the employees of other HUBZone small business concerns.

(e) A HUBZone joint venture agrees that in the performance of the contract, the applicable percentage specified in paragraph (d) of this clause will be performed by the HUBZone small business participant or participants.

(f) A HUBZone small business concern nonmanufacturer agrees to furnish in performing this contract only end items manufactured or produced by HUBZone small business manufacturer concerns. This paragraph does not apply in connection with construction or service contracts.

(End of clause)

52.223-3 HAZARDOUS MATERIAL IDENTIFICATION AND MATERIAL SAFETY DATA (JAN 1997)

(a) "Hazardous material", as used in this clause, includes any material defined as hazardous under the latest version of Federal Standard No. 313 (including revisions adopted during the term of the contract).

(b) The offeror must list any hazardous material, as defined in paragraph (a) of this clause, to be delivered under this contract. The hazardous material shall be properly identified and include any applicable identification number, such as National Stock Number or Special Item Number. This information shall also be included on the Material Safety Data Sheet submitted under this contract.

Material	Identification No.
(If none, insert "None")	

(c) This list must be updated during performance of the contract whenever the Contractor determines that any other material to be delivered under this contract is hazardous.

(d) The apparently successful offeror agrees to submit, for each item as required prior to award, a Material Safety Data Sheet, meeting the requirements of 29 CFR 1910.1200(g) and the latest version of Federal Standard No. 313, for all hazardous material identified in paragraph (b) of this clause. Data shall be submitted in accordance with Federal Standard No. 313, whether or not the apparently successful offeror is the actual manufacturer of these items. Failure to submit the Material Safety Data Sheet prior to award may result in the apparently successful offeror being considered nonresponsible and ineligible for award.

(e) If, after award, there is a change in the composition of the item(s) or a revision to Federal Standard No. 313, which renders incomplete or inaccurate the data submitted under paragraph (d) of this clause, the Contractor shall promptly notify the Contracting Officer and resubmit the data.

(f) Neither the requirements of this clause nor any act or failure to act by the Government shall relieve the Contractor of any responsibility or liability for the safety of Government, Contractor, or subcontractor personnel or property.

(g) Nothing contained in this clause shall relieve the Contractor from complying with applicable Federal, State, and local laws, codes, ordinances, and regulations (including the obtaining of licenses and permits) in connection with hazardous material.

(h) The Government's rights in data furnished under this contract with respect to hazardous material are as follows:

(1) To use, duplicate and disclose any data to which this clause is applicable. The purposes of this right are to--

(i) Apprise personnel of the hazards to which they may be exposed in using, handling, packaging, transporting, or disposing of hazardous materials;

(ii) Obtain medical treatment for those affected by the material; and

(iii) Have others use, duplicate, and disclose the data for the Government for these purposes.

(2) To use, duplicate, and disclose data furnished under this clause, in accordance with subparagraph (h)(1) of this clause, in precedence over any other clause of this contract providing for rights in data.

(3) The Government is not precluded from using similar or identical data acquired from other sources.

(End of clause)

52.247-34 F.O.B. DESTINATION (NOV 1991)

(a) The term "f.o.b. destination," as used in this clause, means--

(1) Free of expense to the Government, on board the carrier's conveyance, at a specified delivery point where the consignee's facility (plant, warehouse, store, lot, or other location to which shipment can be made) is located; and

(2) Supplies shall be delivered to the destination consignee's wharf (if destination is a port city and supplies are for export), warehouse unloading platform, or receiving dock, at the expense of the Contractor. The Government shall

not be liable for any delivery, storage, demurrage, accessorial, or other charges involved before the actual delivery (or "constructive placement" as defined in carrier tariffs) of the supplies to the destination, unless such charges are caused by an act or order of the Government acting in its contractual capacity. If rail carrier is used, supplies shall be delivered to the specified unloading platform of the consignee. If motor carrier (including "piggyback") is used, supplies shall be delivered to truck tailgate at the unloading platform of the consignee, except when the supplies delivered meet the requirements of Item 568 of the National Motor Freight Classification for "heavy or bulky freight." When supplies meeting the requirements of the referenced Item 568 are delivered, unloading (including movement to the tailgate) shall be performed by the consignee, with assistance from the truck driver, if requested. If the contractor uses rail carrier or freight forwarded for less than carload shipments, the contractor shall ensure that the carrier will furnish tailgate delivery, when required, if transfer to truck is required to complete delivery to consignee.

(b) The Contractor shall--

- (1)(i) Pack and mark the shipment to comply with contract specifications; or
- (ii) In the absence of specifications, prepare the shipment in conformance with carrier requirements;
- (2) Prepare and distribute commercial bills of lading;
- (3) Deliver the shipment in good order and condition to the point of delivery specified in the contract;
- (4) Be responsible for any loss of and/or damage to the goods occurring before receipt of the shipment by the consignee at the delivery point specified in the contract;
- (5) Furnish a delivery schedule and designate the mode of delivering carrier; and
- (6) Pay and bear all charges to the specified point of delivery.

(End of clause)

252.246-7000 MATERIAL INSPECTION AND RECEIVING REPORT (DEC 1991)

At the time of each delivery of supplies or services under this contract, the Contractor shall prepare and furnish to the Government a Material Inspection and Receiving Report in the manner and to the extent required by Appendix F, Material Inspection and Receiving Report, of the Defense FAR Supplement.

(End of clause)

IHD 195 - PROPOSAL REQUIREMENTS (FEB 2000) (NAVSEA/IHD)

GENERAL INFORMATION: Each offeror must submit an offer/proposal and other written information in strict accordance with these instructions. When evaluating an offeror the Government will consider how well the offeror complied with both the letter and spirit of these instructions. The Government will consider any failure on the part of the offeror to comply with both the letter and the spirit of these instructions to be an indication of the type of conduct it can expect during contract performance. Therefore, the Government encourages offerors to contact the Contracting Officer by telephone, facsimile transmission, e-mail, or mail in order to request an explanation of any aspect of these instructions.

The offeror shall submit the following information:

1. One (1) sample of spherical aluminum powder in the Quantity of One (1) pound with the Material Safety Data Sheet and Certificate of Analysis.
2. Two (2) copies of the past performance information, Volume I.
3. Two (2) copies of the price proposal with completed solicitation package, Volume II.

Volume I & II shall be provided by closing date of the solicitation to:

Naval Surface Warfare Center
101 Strauss Avenue, Bldg 1558
Attn: Levonson White, Code 1142G
Indian Head MD 20640-5035

The Spherical Aluminum Powder One (1) pound sample is to provided by closing date of the solicitation in accordance with IHD 30 Hazardous Material to:

Naval Surface Warfare Center
101 Strauss Avenue, Bldg
Attn: Audrey , Bldg. 863
Indian Head MD 20640-5035

OFFERORS SHALL ADDRESS THE FOLLOWING FACTORS: (Listed in order of importance) Information shall be submitted as detailed below.

I. Each offeror shall submit One (1) Pound of Spherical Aluminum Powder with its acceptable Material Safety Data Sheet and Certificate of Analysis.**II. VOLUME I – PAST PERFORMANCE (Shall contain only Past Performance Information)**

Past performance is a measure of the degree to which an offeror, as an organization, has during the past three (3) years: (1) satisfied its customers, and (2) complies with federal, state, and local laws and regulations. The offeror shall provide a list of references using the Past Performance Matrix, (Enclosure 1), who will be able to provide information regarding the offeror's past performance during the past three (3) years regarding: (1) customer satisfaction; (2) timeliness; (3) technical success; (4) program management; (5) and the quality of products.

The offeror will submit the Past Performance Questionnaire to each of the references listed on the Past Performance Matrix, a minimum of three (3) is required. THE OFFEROR SHALL INSTRUCT THE **REFERENCES** TO **COMPLETE** THE PAST PERFORMANCE QUESTIONNAIRE AND **MAIL** THEM DIRECTLY TO:

Naval Surface Warfare Center
101 Strauss Avenue, Bldg 1558
Attn: Levonson White, Code 1142G
Indian Head MD 20640-5035

The offeror's selected references must be listed on the Past Performance Matrix. Failure of the references to submit the Past Performance Questionnaire to the Contract Specialist by **MAY 25, 2003** will result in the inability of the Government to rank the offeror's past performance.

NOTE: PAST PERFORMANCE INFORMATION & QUESTIONNAIRE SHEETS ARE ATTACHMENTS TO THE SOLICITATION.**VOLUME II – Price (with completed solicitation package)**

Although price is the least important factor, it will not be ignored. The degree of its importance will increase with the degree of equality of the offers in relation to the other factors on which selection is to be made. Price will be evaluated by the Contracts personnel to determine fair and reasonableness through the most appropriate method available.

This folder/binder shall contain (2) complete copies of the solicitation (the RFP) with all Representations/Certifications executed and pricing appropriately noted in Section B or any continuation sheets.

Information should be submitted to clearly show the basis for the amount of each cost element and how the amount was developed providing sufficient information for government use in determining the proposed prices fair and reasonable.

IHD 211 - BEST VALUE EVALUATION AND BASIS FOR AWARD (FFP) (MAR 2000) (NAVSEA/IHD)

I. The contract resulting from this solicitation will be awarded to that responsible offeror whose offer, conforming to the solicitation, is determined most advantageous to the Government price and other factors considered. The offeror's proposal shall be in the form prescribed by this solicitation and shall contain a response to each of the areas. Proposals will be evaluated and rated against the factors listed below, in descending order of importance:

Sample of Spherical Aluminum Powder
Past Performance
Price

If all submitted samples meet the specification, past performance and price will become more significant factors. In determining best overall value, the Government will first assess an offeror on the basis of provided sample and then compare and rank offerors on the basis of past performance. Offerors who provide an unacceptable sample will not be considered for award. Then the Government will compare the tradeoffs between offerors which provided an acceptable sample, performance and price. The offer who represents the best value will be the offeror who represents the best tradeoff between acceptable sample, superior performance and price.

A. SPHERICAL ALUMINUM POWDER SAMPLE

1. The **one pound sample** provided by the offeror and will be evaluated against the following:

Vendor must certify by analysis that the material meets the requirements below. Reference WS 19742 for test procedures.

	<u>Min</u>	<u>Max</u>
(a) Free Aluminum, %	98.0	---
(b) Volatile Matter %	---	0.10
(c) Iron, as Fe, %	---	0.40
(d) Average Particle Size X100 Microtrac (in SRA 150 module), u	7	12
(e) Apparent Density, g/cc	0.60	0.96
(f) Paste Viscosity, kp	---	5.5
(g) Particles shall be spherical versus ground		

B. PAST PERFORMANCE

1. The Government will evaluate the quality of the offeror's past performance. This evaluation is separate and distinct from the Contracting Officer's responsibility determination. The assessment of the offeror's past performance will be used to evaluate the relative capability of the offeror and their competitors to successfully meet the requirements of the RFP. Past performance of significant and/or critical subcontractors will be considered to the extent warranted by the subcontractor's involvement in the proposed effort.

2. The Government will evaluate the quality of the offeror's past performance. This may include any aspect of past performance that is related to this contract. A record of poor past performance may be considered an indication that the offeror may be lacking in areas such as reliability, quality and customer satisfaction. However, a record of average or exceptional past performance will not result in favorable assessment of an otherwise technically deficient technical proposal. In evaluating an offeror's past performance, the Government will consider information contained in the offeror's past performance references, information obtained from other sources, including past and present customers, subcontractors and any others who may have useful information, and other past performance data available to the Government. Offerors with no past performance history will receive a neutral rating.

3. Contracting Officers will use the following adjectival definitions as guidelines in evaluating past performance:

Excellent - The Offeror's performance was consistently superior. The contractual performance was accomplished with few minor problems, for which corrective action taken by the Offeror was highly effective.

Good - The Offeror's performance was better than average. The contractual performance was accomplished with some minor problems, for which corrective actions taken by the Offeror were effective. They would be willing to do business with the Offeror again.

Poor - The Offeror's performance was entirely unsatisfactory and that they would not do business with the Offeror again under any circumstances. The contractual performance of the element being assessed contains problems for which the Offeror corrective actions appear to be or were ineffective.

Neutral – Offerors lacking relevant past performance history will receive a neutral rating for past performance. The offeror must provide the information requested above the past performance evaluation or affirmatively state that it possesses no relevant directly related or similar past performance. An offer that fails to provide the past performance information or to assert that the company has no relevant directly related or similar past performance may be considered ineligible for award.

C. PRICE

1. Although price is not the most important evaluation factor, it will not be ignored. The degree of its importance will increase with the degree of equality of the proposals in relation to the other factors on which selection is to be based.

Note: Prices shall be evaluated in accordance with FAR 52.219-4 NOTICE OF PRICE EVALUATION PREFERENCE FOR HUBZONE SMALL BUSINESS CONCERNS (JAN 1999)

II. The Government may award a contract on the basis of initial offers received, without discussions. Therefore, each initial offer should contain the offeror's best terms from a cost/price, technical and past performance standpoint. However, if considered necessary by the contracting officer, discussions will be conducted only with those offerors determined to have a reasonable chance for award.

Factor 1 - Spherical Aluminum Powder Sample

Factor 2 – Past Performance

Factor 3 – Price

The offeror's submission in response to this solicitation will be evaluated. Each factor shall be evaluated based on the merits of the information contained in the offerors' submission. A sample evaluation is provided below:

<u>Offeror</u>	<u>Sample</u>	<u>Past Performance Rating</u>	<u>Price</u>
A	Acceptable	Good	\$320,000
B	Acceptable	Excellent	\$322,000
C	Unacceptable	Good	\$300,000
D	Acceptable	Poor	\$302,000
E	0**	Good	\$330,000

** Offeror did not comply with RFP instructions - was not evaluated

Once this information is tabulated, offerors will be compared making value and price tradeoffs and award will be made to the offeror that represents the Best Value to the Government. If the offeror with an acceptable sample has

the highest past performance rating and also represents the lowest price then that offeror is clearly the Best Value. If an offeror with an acceptable sample has the highest past performance rating and has a higher price, then a determination must be made whether the difference in past performance value is worth the higher price. In the example the Government may award to Offeror A, Offeror B (if it could be determined whether the difference in greater value is worth the difference in price when compared to Offeror A). Offeror C would not be considered for award due to an unacceptable sample. Offeror D would not be considered for award due to a POOR past performance rating. Offeror E would not be considered for award due to not providing a sample.

IHD 49 - INSPECTION AND ACCEPTANCE (DESTINATION) (NAVSEA/IHD) (FEB 2000)

Inspection and acceptance of the supplies or services to be furnished hereunder shall be made at destination by the receiving activity.

IHD 61 - PLACE OF DELIVERY: DESTINATION (NAVSEA/IHD) FEB 2000

(a) The articles to be furnished hereunder shall be delivered all transportation charges paid by the contractor to:

Receiving Officer
Indian Head Division
Attn: Don Hageman 301-744-1854
Naval Sea Systems Command
101 Strauss Avenue
Indian Head, Maryland 20640-5035

(b) Bids submitted on a basis other than F.O.B. Destination will be rejected as non-responsive and proposals may be deemed unacceptable.

IHD 76 - INDIAN HEAD DIVISION, NAVAL SEA SYSTEMS COMMAND, HOURS OF OPERATION AND HOLIDAY SCHEDULE (NAVSEA/IHD) FEB 2000

1. The policy of this station is to schedule periods of reduced operations or shutdown during holiday periods. Deliveries will not be accepted on Saturdays, Sundays or Holidays except as specifically requested by the Naval Sea Systems Command. All goods or services attempted to be delivered on a Saturday, Sunday or Holiday without specific instructions from the Contracting Officer or his duly appointed representative will be returned to the contractor at his expense with no cost or liability to the U.S. Government.

2. The scheduled holidays for Indian Head Division, Naval Sea Systems Command are:

<u>HOLIDAY</u>	<u>DATE OF OBSERVANCE</u>
New Year's Day	01 January (Tuesday)*
Martin Luther King's Birthday	21 January (Monday)*
President's Day	18 February (Monday)*
Memorial Day	28 May (Monday)*
Independence Day	4 July (Wednesday)*
Labor Day	3 September (Monday)*
Columbus Day	15 October (Monday)*
Veteran's Day	12 November (Monday)*
Thanksgiving Day	22 November (Thursday)*
Christmas Day	25 December (Tuesday)*

* If the actual date falls on a Saturday, the holiday will be observed the preceding Friday. If the holiday falls on a Sunday, the observance shall be on the following Monday.

3. The hours of operation for the Contracts Division and Receiving Branch are as follows:

AREA	FROM	TO
Contracts Division (BLDG. 1558)	7:30 A.M.	4:00 P.M.
Receiving Branch (BLDG. 116)	7:30 A.M.	11:00 A.M.
	12:30 P.M.	2:00 P.M.

If you intend to visit the Contracts Division, it is advised that you call for an appointment at least 24 hours in advance.

IHD 88 - CERTIFICATE OF ANALYSIS (NAVSEA/IHD) FEB 2000

(a) A certificate of analysis/test showing that the material has been sampled and/or tested and found to be within the minimum requirements of the specification/drawing/contract shall be prepared. The certificate shall be () maintained by the contractor for a minimum of one (1) year from the completion of the order/contract or (X) forwarded to this activity; one (1) copy to accompany the shipment (in the packing list envelope) and one (1) copy mailed to arrive at time of receipt of the shipment (mark the certificate to the attention of: Code 2110).

(b) Each certificate must be traceable to the material covered by the certificate. The certificate shall state, above the signature of a legally authorized representative of the company the following:

This certification concerns a matter within the jurisdiction of an agency of the United States and the making of a false, fictitious, or fraudulent certification may render the maker subject to prosecution under Title 18, United States Code, Section 1001.

(c) Certificate for shipments of bulk chemicals shall state contract number, drawing or specification number, lot number, rail car number if shipped by rail or trailer number if by truck, and the date of shipment.

(d) Any demurrage accrued as a result of detaining commercial carriers because of nonreceipt of the certificate shall be the responsibility of the Contractor.

(e) Failure to provide certification at the time of shipment may result in material being rejected and returned at the contractor's expense.

IHD 89 - CERTIFICATE OF COMPLIANCE (NAVSEA/IHD) FEB 2000

(a) A certification of material shall be provided by the Contractor, one (1) copy to accompany the shipment (in the packing list envelope) and (1) copy mailed to arrive at time of receipt of the shipment. Mark all certificates to the attention of Code 2110.

(b) The certificate shall state compliance of material with drawing specification and contract/order requirements. The certificate shall as a minimum state the company name, contract/order number, drawing or specification number, and date. The certificate shall state, above the signature of a legally authorized representative of the company, the following:

This certification concerns a matter within the jurisdiction of an agency of the United States and making a false, fictitious, or fraudulent certification may render the maker subject to prosecution under Title 18, United States Code 1001.

(c) Failure to provide certification at the time of shipment may result in material being rejected and returned at the contractor's expense.

CODE IDENT

WS 19742

53711

NAVAL SEA SYSTEMS COMMAND
MATERIAL SPECIFICATION
FOR
POWDER, SPHERICAL ALUMINUM



ISSUED

7 March 1984

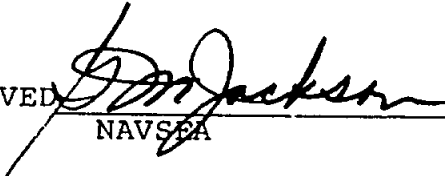
PREPARED BY

Thickol / WINTSVILLE DIVISION

NAVAL SEA SYSTEMS COMMAND
DEPARTMENT OF THE NAVY

WS 19742

ISSUE AND APPROVAL RECORD

ISSUE	DESCRIPTION	DATE
Original	<p>This specification establishes the requirements for one type of spherical aluminum powder.</p> <p>APPROVED  NAVSEA</p>	<p>13 September 1982 Released: 7 March 1984</p>

WS 19742
13 September 1982
Superseding
XWS 19742A
4 March 1982
7 March 1984

CODE IDENT
53711

MATERIAL SPECIFICATION
FOR
POWDER, SPHERICAL ALUMINUM

1. SCOPE

1.1 Scope. This specification establishes the requirements for one type of spherical aluminum powder.

2. APPLICABLE DOCUMENTS

2.1 Government documents. The following documents of the issue in effect on date of invitation for bids or request for proposal, form a part of the specification to the extent specified herein.

STANDARDS

Military

MIL-STD-129

Marking for Shipment and Storage

(Copies of specifications, standards, drawings, and publications required by suppliers in connection with specified procurement functions should be obtained from the procuring activity or as directed by the contracting officer.)

2.2 Non-Government documents. The following documents form a part of this specification to the extent specified herein. Unless otherwise indicated the issue in the effect on date of invitation for bids or request for proposal shall apply.

FSC

WS 19742

STANDARDS

American Society for Testing and Materials

ASTM B 329

Apparent Density for Refractory
Metals and Components by the
Scott Volumeter, Test for

(Application for copies should be addressed to the American
Society for Testing and Materials, 1916 Race Street, Philadelp-
hia, Pennsylvania 19103.)

3. REQUIREMENTS

3.1 General material requirements.

3.1.1 Chemical and physical properties. Chemical and physical properties of the aluminum powder shall conform to table I.

Table I. Chemical and physical properties

Property	Min	Max
Free aluminum, percent	98.0	---
Volatile matter, percent	---	0.10
Iron, as Fe, percent	---	0.40
Average particle diameter, micrometers	5	9
Weight median diameter		
MSA* analysis, micrometers	7	12
Micromerograph analysis, micrometers	8	12
Particle size, micrometers (includes 99.9 percent total particles)	---	70
Apparent density, g/cc	0.60	0.96
Paste viscosity, kilopoise	---	5.5

*Mine Safety Appliance Company (MSA), Pittsburgh, Pennsylvania

3.1.2 Workmanship. Workmanship shall be such that the aluminum powder is uniform, of consistent high quality and free from contamination within the limits specified herein. Intralot uniformity shall be such that individual drum samples shall deviate no more than 30 percent from the lot average for all the requirements specified herein.

3.2 Qualification. Aluminum powder, furnished under this specification, shall be a product which has been tested and has passed the qualification tests specified herein (see 4.1.2.1).

4. QUALITY ASSURANCE PROVISIONS

4.1 General.

4.1.1 Responsibility for inspection. Unless otherwise specified in the contract or order, the supplier is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified, the supplier may utilize his own facilities or any commercial laboratory acceptable to the procuring activity. The procuring activity reserves the right to perform any of the inspections set forth in the specification where such inspections are deemed necessary to assure supplies and services conform to prescribed requirements.

4.1.2 Special tests and inspections.

4.1.2.1 Qualification tests. Qualification tests shall consist of the tests specified in table II, and tests using the material in the intended application. Other qualification tests, if required, shall be as specified by the procuring activity. The method of sampling and size of sample for qualification shall be specified by the procuring activity.

4.2 Quality conformance inspections (QCI). QCI shall consist of the tests and inspections specified in table II.

4.2.1 QCI sampling provisions. Sampling shall be as specified in the purchase order. Each sample shall be labeled and identified as to material and source (container number, vat or tank, time taken, or other basis to determine position of the sample in relation to the bulk of the material). As a minimum, each manufacturing lot (see 6.3.1) shall be sampled for testing.

4.3 Test methods. Tests shall be performed using apparatus, reagents, and procedures specified herein or equivalents thereof. Alternate inspection methods may be proposed by the supplier but must be approved by the procuring activity prior to use in acceptance testing.

Table II. Quality conformance tests and inspections

Requirement	Reqt para	Test para	Class of test	
			Qual	QCI
Chem & phys properties:				
Free aluminum	3.1.1	4.3.1	X	X
Volatile matter	3.1.1	4.3.2	X	X
Iron	3.1.1	4.3.3	X	X
Average particle dia	3.1.1	4.3.4	X	X
Weight median dia	3.1.1	4.3.5	X	X
Particle size	3.1.1	4.3.5	X	X
Apparent density	3.1.1	4.3.6	X	X
Paste viscosity	3.1.1	4.3.7	X	X
Workmanship	3.1.2	4.4.2	X	X
Qualification	3.2	4.1.2.1	X	

4.3.1 Free metallic aluminum.4.3.1.1 Apparatus.

(a) Gas volumetric apparatus as shown on figure 1

4.3.1.2 Reagent.

(a) Sodium hydroxide solutions, 2 and 5 percent

4.3.1.3 Determination of free metallic aluminum. Weigh accurately 0.33 to 0.35 gram (g) of sample into an extraction thimble. Following the manufacturer's procedure for operating the eudiometer, determine the gas volume formed by the reaction of the sample when dissolved in the sodium hydroxide solution in the reaction beaker.

Calculation:

$$\text{Percent free metallic aluminum} = \frac{V \times (P-p) \times 0.02883}{(273 + T) \times W}$$

Where: V = measured volume of gas, milliliter

P = barometric pressure, millimeter (mm)
mercury (Hg)

p = vapor pressure of water, mm Hg at
temperature °C

T = temperature of system at equilibrium, °C

W = weight of sample, g

Report the free metallic aluminum to the nearest 0.01 percent.

4.3.2 Volatile matter. Weigh accurately, to the nearest 0.0001 gram, approximately 5 grams of sample into a tared moisture dish. Heat the dish and contents for 4 hours at $+105^{\circ} \pm 3^{\circ}$ C. Remove from the oven, cool in a desiccator and reweigh

Calculation:

$$\text{Percent volatile matter} = \frac{(A - B) \times 100}{A - C}$$

Where: A = weight of moisture dish and sample, g

B = weight of moisture dish and dried sample, g

C = weight of dry moisture dish, g

Report volatile matter to the nearest 0.01 percent.

4.3.3 Total iron, as Fe.

4.3.3.1 Apparatus.

- (a) Beckman spectrophotometer, Model DK-2, or equivalent, with matched 1-centimeter corex or silica cells, set up to measure in the 510 nanometer range
- (b) Micro buret, 10-ml

4.3.3.2 Reagents.

- (a) Hydrochloric acid, concentrated
- (b) Hydroxylamine hydrochloride, 10 percent
- (c) o-Phenanthroline solution, 0.25 percent
- (d) Sodium citrate solution, 25 percent
- (e) Bright iron wire, primary standard grade

4.3.3.3 Determination of total iron as Fe.

4.3.3.3.1 Preparation of standard iron curve. Using the following method, plot a standard iron curve by plotting the absorbance versus concentration of iron in micrograms per milliliter. Weigh approximately 0.05 gram of bright iron wire to the nearest 0.0001 gram and place in a 1-liter volumetric flask. Add 2 ml of concentrated hydrochloric acid and some hot distilled water. After the iron is dissolved, cool and dilute to volume with distilled water and mix. Transfer, by means of a micro buret, 1.00 ml, 3.00 ml, 5.00 ml, 7.00 ml and 9.00 ml of the solution to a series of 100-ml volumetric flasks. Dilute each to about 70 ml with distilled water and mix well. Prepare a blank by adding 2 drops of concentrated hydrochloric acid to 70 ml of distilled water. To each flask add 1 ml of hydroxylamine hydrochloride solution, mix well and let stand for at least 15 minutes. After adding 10 ml of 0.25 percent o-Phenanthroline, mix well, and add 1 ml of 25 percent sodium

citrate solution, dilute to volume, mix well and allow to stand at least 30 minutes at not less than +20°C (+68°F). Using the blank to zero the instrument, determine the absorbance of each sample solution at a wavelength of 510 nanometers and a slit width no greater than 0.18 mm. Prepare a standard curve of iron concentration in micrograms per milliliter versus absorbance in nanometers.

4.3.3.3.2 Sample analysis. For determination of iron in spherical aluminum powder, weigh approximately 1 gram of a sample to the nearest 0.0001 gram into a 50-ml beaker. Transfer quantitatively to a 500-ml volumetric flask. Add 10.5 ml of concentrated hydrochloric acid solution and swirl. Dilute to volume with distilled water and invert the flask until all solids have dissolved. Pipet a 50-ml aliquot into a 100-ml flask and dilute to about 70 ml with distilled water. Prepare a blank as above to zero the instrument. Add the reagents as described in the above standardization to both the sample and blank flasks beginning with hydroxylamine hydrochloride. Determine the absorbance of the sample solution at a wavelength of 510 nanometers and slit width no greater than 0.18 mm.

Calculation:

$$\text{Percent iron as Fe} = \frac{A}{10W}$$

Where: A = concentration from standard curve, micrograms per ml

W = weight of sample, g

Report the iron to the nearest 0.01 percent.

4.3.4 Average particle diameter.

4.3.4.1 Apparatus.

(a) Fisher Sub Sieve Sizer with accessories, or equivalent

4.3.4.2 Determination of average particle diameter.

After checking the apparatus, prepare a sample tube. Weigh approximately 2.70 grams of the dry sample to the nearest 0.01 gram and transfer into the tube. Following the instructions in the instruction manual, determine the average particle diameter and report to the nearest 0.1 micrometer.

4.3.5 Weight median diameter and particle size of 99.9 percent of total particles. The particle size may be determined by MSA (see 4.3.5.1) or micromerograph (see 4.3.5.2) analysis.

4.3.5.1 MSA analysis.

4.3.5.1.1 Apparatus.

(a) MSA particle size analysis equipment, or equivalent

4.3.5.1.2 Reagents.

(a) Settling liquid - reagent grade chlorobenzene

(b) Feed liquid - volumetric mixture of 60 percent chlorobenzene and 40 percent benzene (reagent grades)

(c) Surfactant - Twitchell Base 8240 (Emery Industries Inc., Cincinnati, Ohio), or equivalent

4.3.5.1.3 Determination. Weigh a 0.012 gram sample onto a 4 by 4 inch glass plate. Add 1 drop of Twitchell Base 8240 surfactant. Paste the sample for 2 minutes with a steel spatula. The resultant paste should be a uniform dispersion. Transfer the paste to the MSA feed chamber by means of a sharpened steel spatula. Add approximately 0.8 to 1.0 ml of feed liquid. Hold the chamber between thumb and index finger and shake to bring the sample into suspension. Introduce the sample into the 1.0-mm MSA tube, prefilled to the mark with chlorobenzene and start the analysis schedule. Determine the weight median diameter, and the particle size of 99.9 percent of total particles. Report both values to the nearest 0.1 micrometer.

4.3.5.2 Micromerograph analysis.

4.3.5.2.1 Apparatus.

(a) Sharples Micromerograph Type XC, or equivalent, with special adaptation as follows:

- (1) Shock absorbing mount
- (2) One-half length sedimentation column
- (3) Recorder chart speed of 12 inches a minute and 12 inches an hour

(b) Ritter dental x-ray machine, or equivalent

4.3.5.2.2 Determination. Adjust the recorder pen to read 50 percent of full-scale deflection and clean the operating parts of the micromerograph. Place a sample in the apparatus and determine the weight median diameter and the particle size of 99.9 percent of total particles. Report the weight median diameter to the nearest 0.1 micrometer. Report the particle size of 99.9 percent of all particles to the nearest 1.0 micrometer.

4.3.6 Apparent density. Apparent density shall be determined in accordance with ASTM B 329.

4.3.7 Paste viscosity.

4.3.7.1 Apparatus.

(a) Laboratory mixer, Barbender Plastigraph, or equivalent

(b) Viscometer, Brookfield Model HBT, or equivalent, multispeed with heliopath stand and TC spindle

4.3.7.2 Reagent.

- (a) Carboxyl-terminated polybutadiene liquid polymer, 200 to 275 poise at 25°C (Thiokol Corporation, Code Ident No. 25941, HC-434), or equivalent

4.3.7.3 Determination of apparent density. Add 100 grams of polymer to mix bowl. Mix in 300 grams of sample to produce a homogeneous paste. Avoid dusting during addition. Mix for 5 minutes after initial wetting of the sample. Transfer the paste to a metal or glass container of suitable size and shape for the viscosity determination. Allow the paste to reach a temperature of $+27^{\circ} \pm 1^{\circ}\text{C}$ ($+80^{\circ} \pm 2^{\circ}\text{F}$). Stir to prevent settling. Tap the bottom of the container on a hard surface to expel air. Using the viscometer, lower the TC spindle until the bar is about 0.5 inch below the paste surface. Start rotation at five revolutions per minute. When the indicator reaches equilibrium, actuate the heliopath and take as many readings as possible.

Calculation:

Paste viscosity, kilopoise = FR

Where: F = viscometer calibration factor

R = average scale reading

Report the average of the corrected readings to the nearest 0.1 kilopoise.

4.4 Examinations.

4.4.1 Inspection of filled containers. All filled containers shall be inspected prior to shipment or use for accuracy of markings and for defects in containers and closures. All defective containers and closures shall be repaired or replaced, and contents therein shall be reinspected prior to shipment or use.

WS 19742

4.4.2 Visual inspection. All samples shall be visually inspected to determine compliance with the requirements of 3.1.2.

4.5 Records. Certification and test data shall be supplied as required by the procuring activity.

5. PREPARATION FOR DELIVERY

5.1 Packaging and packing. Unless otherwise specified in the purchase order, packaging and packing of the aluminum powder shall be in accordance with commercial practice to insure carrier acceptance and shall be of such construction and materials that the contents will be adequately protected against loss or contamination.

5.2 Container marking. Unless otherwise specified in the purchase order, each shipping container shall be marked in accordance with the requirements of MIL-STD-129. Container marking shall include the following:

- (a) The supplier's lot number
- (b) Procuring activity purchase order number
- (c) Container identification number (applied in numerical sequence as the containers are filled)
- (d) Date of manufacture
- (e) Net and tare weight of the container
- (f) Material identification

6. NOTES

6.1 Intended use. The intended use of the material described herein is as an ingredient in solid propellant formulations.

6.2 Ordering data. Procurement documents should specify the following:

- (a) Title, number and date of this specification
- (b) QCI sampling requirements
- (c) Qualification sampling requirements
- (d) Quantity ordered
- (e) Special packaging, packing, or shipping requirements, if applicable

6.3 Definitions.

6.3.1 Lot.

6.3.1.1 At place of manufacture. At place of manufacture, a lot consists of aluminum powder from one manufacturer's batch or blend, or if manufactured by a continuous process, any quantity of material made from homogeneous raw materials and during a period of uninterrupted operations.

6.3.1.2 At place of delivery. At place of delivery, a lot consists of aluminum powder from one manufacturer's lot received in a single shipment. Partial shipments may be considered a single shipment at the option of the procuring activity.

6.4 Qualification. The procuring activity reserves the right to purchase only those products which have been previously tested and found to meet the requirements of this specification and which have proven satisfactory for the end use. Prospective suppliers whose products have not been tested and found

satisfactory by the procuring activity will be required to have their products tested by the procuring activity in order that they may be considered eligible to be awarded contracts for the products defined by this specification.

Custodian:
Navy - OS

Preparing activity:
Navy - OS

- A - 1 liter leveling bottle or bulb
- B - Gas measuring buret, 500-ml capacity, graduated in 0.2 ml divisions from 0 to 10 ml and from 450 to 500 ml
- C - 24/40 tapered stopper ground joint with stopcock
- D - 500-ml round bottom flask with thermometer well, 35/20 tapered stopper ball and socket joint
- E - Small glass-covered magnetic bar enclosed in offset of dropping device
- F - Rubber tubing
- G - Extraction thimble, 10 x 50 mm

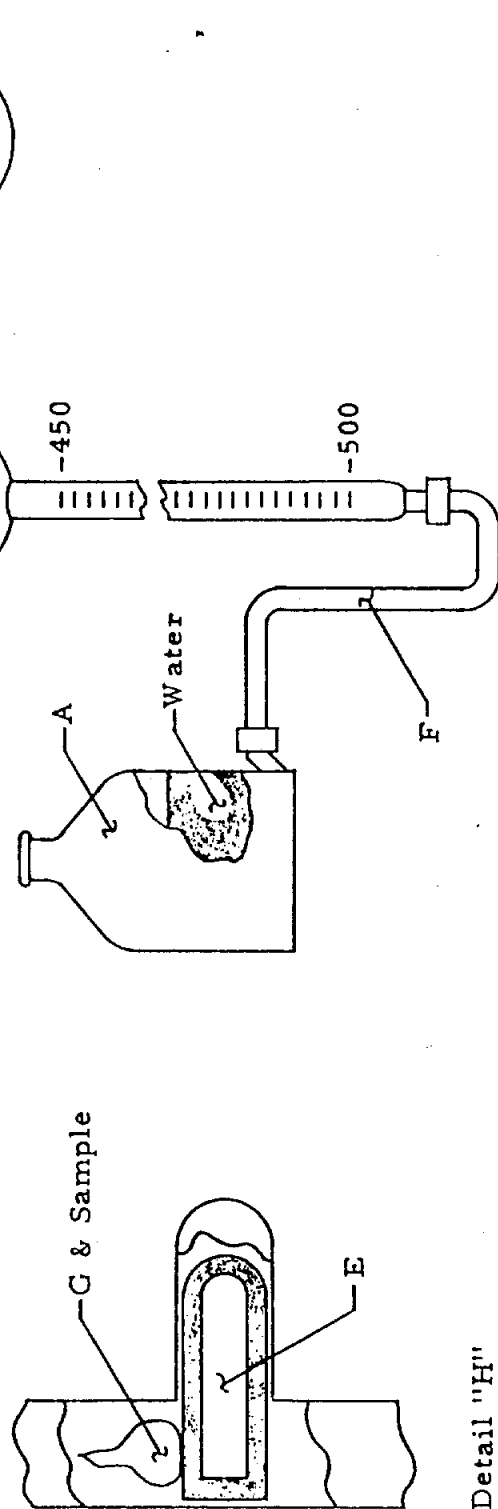


Figure 1. Eudiometer for Determination of Aluminum Metal in Aluminum Powder